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A summary of eight research memorandums and two working papers presents the findings of a study of racial balance in San Francisco's schools. Various alternative pupil attendance patterns were designed and assessed for their educational implications, feasibility, cost, and effect on racial balance. The city has high residential concentrations of various minority groups which are increasing in relation to the white population, thus making racial balance more difficult to achieve. Moreover, neighborhood school attendance rules tend to perpetuate segregation. Recommended are changes in attendance areas, school organization patterns, and modification of secondary school facilities. Implementation of new attendance policies must involve full participation of the community and the district staff, and teacher attitudes and suggestions must also be considered. (NH)

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STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA

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Research Memorandum No. 8 – Summary Report

IMPROVING RACIAL BALANCE IN THE SAN FRANCISCO PUBLIC SCHOOLS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

Prepared for:

SAN FRANCISCO UNIFIED SCHOOL DISTRICT

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By: WILLIAM J. PLATT AND ROBERT A. HARKER

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FOREWORD

In September 1966, the San Francisco Unified School District (SFUSD) contracted with Stanford Research Institute (SRI) to study alternative means by which racial balance in San Francisco's public schools might be improved. This research memorandum is the summary report of the research findings.

The objectives of the study were that the Institute develop and evaluate several alternative patterns of pupil attendance that, if adopted, will result in the racial composition of individual schools more nearly reflecting the districtwide racial distribution. Also, the educational implications, feasibility, and cost-effectiveness of the alternatives are to be evaluated.

The terms of reference of SRI's contract were established by the Ad Hoc Committee on Ethnic Factors in the San Francisco Schools. This committee was initially headed by Mrs. Ernest R. Lilienthal. When Mrs. Lilienthal became President of the Board of Education in January 1967, Reynold H. Colvin was appointed Chairman of the Ad Hoc Committee. Dr. William L. Cobb, Human Relations Officer for the SFUSD, served as Project Coordinator. Their splendid cooperation, and that of the Superintendent and Assistant Superintendents, is gratefully acknowledged.

The analyses and conclusions of this study are those of Stanford Research Institute. While many members of the Board and staff of the SFUSD provided time, data, and counsel invaluable to the conduct of the research, the publication of these reports does not signify the approval or concurrence of the district nor its personnel.

The findings of this study are reported in eight research memorandums and two working papers, which have been submitted to the SFUSD. They are:

Research Memorandum No. 1, "Measuring Racial Balance," by Ben Lefkowitz and Tony D'Esopo. An index of racial balance is derived and then applied to the 1966 student distribution.

Research Memorandum No. 2, "Public School Population in 1971," by William F. Powers. San Francisco's public school population in 1971 is estimated by grade level, census tract, and race.

Research Memorandum No. 3, "Dimensions of Equality of Educational Opportunity," by Judith B. Spellman. Social, economic, and legal trends in the national scene are related to desegregation issues in San Francisco.

Research Memorandum No. 4, "Educational Organization for Desegregation," by William J. Platt. The relationship between achievement and educational conditions, including racial balance, is discussed. A rationale is presented for using feeder attendance rules and grade level reorganization into 3-3-3-3 and 4-4-4 patterns.

Research Memorandum No. 5, "Adapting to Changing Racial Composition--A Survey of San Francisco Teachers and Principals," by Judith B. Spellman, Gertrude D. Peterson, Ann H. Rosenthal, and Prof. Norman Boyan, Consultant. Two surveys are reported: a written questionnaire and 18 group interviews. The purpose is to obtain views on characteristics that make for success in desegregated education and guidelines for continuing educational advance while racial compositions are changing.

Research Memorandum No. 6, "Transportation Requirements for Improved Racial Balance," by Howard R. Ross and Albert E. Moon. Alternative means of transporting pupils are described and costed.

Research Memorandum No. 7, "Evaluation of Alternative Attendance Patterns To Improve Racial Balance," by Robert A. Harker, Hazel B. Ellis, and William J. Platt. The effectiveness and cost consequences of several alternative policies are presented. Maps showing school assignments are included. Earlier reports in the series are drawn on. One alternative pattern is staged through time to illustrate how new policies might be implemented in phases.

Research Memorandum No. 8, Summary Report, "Improving Racial Balance in the San Francisco Unified School District," by William J. Platt and Robert A. Harker.

Working Paper No. 1, "Computer Programs," by Benjamin Lefkowitz. New computer programs devised during the study are described.

Working Paper No. 2, "Attendance Feeder Patterns and Time-Phased Implementation of the C-5 Alternative," by Robert A. Harker, Hazel B. Ellis, and William J. Platt. Detailed data are presented for the alternative attendance patterns and for the time-phased implementation of one pattern.

The authors of this summary report are William J. Platt, Director of Manpower and Education Research, and Robert A. Harker, senior economist, who served as project leader and deputy project leader, respectively.

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BACKGROUND

Objectives

The 125 schools in the San Francisco Unified School District, like those in most other major metropolitan areas, vary considerably in racial and ethnic composition. Their enrollments reflect residential concentrations of racial or ethnic groups. Recognizing these conditions, the SFUSD Ad Hoc Committee on Ethnic Factors in the San Francisco Schools retained Stanford Research Institute to study ways to improve racial balance. Within this overall objective, the study was:

1. To develop alternative attendance patterns that would improve racial balance.

2. To evaluate the effectiveness and cost of each alternative.

3. To review alternatives with community groups.

4. To show how the district might implement a new attendance pattern in steps.

In April 1967, the Board of Education renegotiated the terms of reference of the contract with Stanford Research Institute to delete further community reviews, the third objective. Reviews were postponed until the new Superintendent, Dr. Robert Jenkins, can participate.

The Problem (See Research Memorandum No. 3)

An objective of American public education is equality of educational opportunity. In 1954, the Supreme Court of the United States ruled that states are prohibited ". . . from maintaining racially segregated public schools, . . ." because such schools are ". . . contrary to the equal protection clause of the Fourteenth Amendment." Subsequently, lower courts have made a variety of interpretations on whether racial imbalance that is not a result of purposeful discrimination by school authorities must be corrected.

In California, the 1963 case of Jackson vs Pasadena School District, the McAteer Act of 1965, and the policies and resolutions adopted by the

State Board of Education in 1963 indicate that segregation is not desirable and should not be perpetuated by school boards in California. The California Administrative Code, Title 5, reads:

> Section 2010. State Board Policy. It is the declared policy of the State Board of Education that persons or agencies responsible for the establishment of school attendance centers or the assignment of pupils thereto shall exert all effort to avoid and eliminate segregation of children on account of race or color.

Schools are being called on to help overcome the special problems of minority group children and to narrow educational differences. A key task of the schools is to keep potential dropouts in school and to raise achievement levels of racial and ethnic minority groups. Two methods for accomplishing these tasks are receiving widespread attention: (1) improvement of educational offerings through compensatory and remedial education and (2) improvement of racial balance in the school and classroom. Both approaches require additional resources and, specifically, proportionately more resources allocated to the education of minority group children. The two approaches are probably complementary, rather than competitive.

Compensatory education is designed to provide disadvantaged students with the necessary academic tools to permit them to compete successfully in classrooms and in postschool life. Throughout the United States, school districts are being funded under the Elementary and Secondary Education Act of 1965 to carry out compensatory education programs and evaluate their effectiveness. Several years of longitudinal observations for student participants will probably be necessary before conclusions can be drawn as to the cost-effectiveness of compensatory education.

The clustering of minority groups in segregated residential areas of San Francisco, combined with the traditional concept of the neighborhood school, produces de facto segregated schools. Several factors have aggravated this phenomenon, including the movement of white families out of the city to the suburbs and the growth of enrollment in private schools in major metropolitan areas.

The Gap in Equality of Educational Opportunity (See Research Memorandum No. 4)

Two recent studies present new evidence on gaps in equality of educational opportunity in public education caused by racial imbalance. The first is a survey published in 1966, Equality of Educational Opportunity,

directed by Prof. James S. Coleman of Johns Hopkins University for the U.S. Office of Education. The survey obtained information on 600,000 students attending Grades 1, 3, 6, 9, and 12 in a national sample of over 4,000 schools. The second study was prepared by the U.S. Commission on Civil Rights and published in 1967 as Racial Isolation in the Public Schools.

These studies (consistent with other evidence) indicate a significant educational gap among racial groups by comparing years of school completed and results shown on achievement tests. They also reveal some rather unexpected evidence on the relationship between student achievement and racial balance. This evidence shows, for example, that Negroes who attend integrated schools score significantly higher on achievement tests than do Negroes who attend segregated schools. In these comparisons all other conditions are held constant. The studies further show that white student achievement is relatively insensitive to racial composition in the classroom.

The findings suggest the following operational guidelines, if the objective of maximum achievement of all students is to be accomplished:

1. Adopt attendance policies that create as much socioeconomic and racial balance among schools as possible.

2. Where imbalance still exists, assign the highest quality teachers to schools enrolling a large proportion of minority group students who come from families with average low education. Teachers so selected would be those with appropriate training and motivation for these assignments.

CONCLUSIONS

Rationale for Desegregation

1. The efforts of the San Francisco Unified School District to diminish racial imbalance are consistent with emerging public policy to increase equality of educational opportunity.

2. Evidence indicates that Negro students have higher scholastic achievement in integrated schools than in segregated Negro schools. White student achievement is relatively insensitive to racial composition of the classroom.

Population and Neighborhoods

3. San Francisco, like most other large cities in the United States, has high residential concentrations of minority groups. It is distinct, however, in that it has relatively large populations of Orientals and "Spanish surnames" in addition to the white and Negro ethnic groups.

4. The nonwhite population is increasing in relation to the white population. This increase is both in population density and in residential area. Thus, efforts to improve racial balance--particularly with white students--become more difficult over time.

5. To the extent that neighborhood attendance rules are strictly observed, schools will reflect the segregated character of the neighborhoods.

Attendance Patterns and Racial Balance

6. Larger attendance areas tend to result in higher measures of racial balance, because more neighborhoods are included. Hence, secondary schools tend to score higher in racial balance than elementary schools do.

7. Changes from a 6-3-3 system to either a 3-3-3-3 or a 4-4-4 system improve racial balance by increasing the area to be served by the school. However, this reorganization increases intraneighborhood transportation and the requirement for changes in school facilities.

8. Simple redistricting of school boundaries has little effect in improving racial balance and, at best, is temporary because of increasing nonwhite population densities and areas. The improvement in racial balance attainable through simple redistricting is less than six percent.

School Facilities

9. The basis of the present school system is the concept of neighborhood schools, and changes to improve racial balance to any significant degree will require changes in school facilities.

10. The anticipated number of high school students in 1971 is only slightly less than the planned capacity of the high schools in 1971, so that any underpopulating of schools in lower socioeconomic neighborhoods creates overcrowding in schools in high socioeconomic neighborhoods. Thus, considerable facility modifications would be required at the secondary school level.

11. The alternative attendance patterns studied entail facility modification costs ranging from about $2 million to $13 million.

Student Transportation

12. One-way busing of students out of lower socioeconomic neighborhoods improves racial balance but tends to underutilize some schools and overcrowd others.

13. Maximum increases for the quadriracial balance indexes appear to be limited to 25 percent for one-way busing, unless major new school facilities are built.

14. Increases in the Negro-non-Negro and white-nonwhite racial balance indexes of 40 percent to 50 percent are attainable with one-way busing.

15. Two-way busing improves racial balance significantly. The quadriracial index increases 42 percent with two-way busing, and the Negro-non-Negro index increases by almost 70 percent. Two-way busing may not be acceptable to the community. It moves students from higher socioeconomic environments to lower ones and may thus bring about some residential resegregation.

16. Capital costs for a district-owned and operated bus system range from about $750,000 to $1.6 million. Annual operating costs range from $100,000 to $500,000.

Implementing New Attendance Policy

17. If decisions on attendance policy are made in the 1967-68 school year and capital funds are made available, a new attendance pattern can be implemented in stages and completed by 1971.

18. Careful planning and full participation of the community and the district staff must be built into any successful implementation program.

19. In improving racial balance and strengthening educational offerings, district administrators should take into account teacher attitudes and suggestions, as reflected in the results of the survey and interviews conducted in this study.

PROJECTED ENROLLMENT
(See Research Memorandum No. 2)

Pupil assignment patterns have been made in this study on the basis of projected 1971 public school population. The year 1971 was selected because: (1) any plan selected by the SFUSD would require several years to implement; (2) the school population is changing in ethnic composition, location, and total number; (3) the school facilities are changing as a result of the 1964 bond issue; and (4) 1971 is near enough in the future to give reasonably reliable forecasts of population change.

Public school enrollment was estimated for 1971 by census tract, by race, and by type of school (elementary, junior high, and senior high school). The method and data are reported in Research Memorandum No. 2. The projections, with corresponding figures for 1966, are shown in Table 1.

Table 1

ENROLLMENT IN SFUSD BY GRADE AND RACE
1966 and 1971
(Thousands of Students)

Race	Year	K-6	7-9	10-12	Percent of Total
White	1966	20.9	9.4	9.9	44.0%
	1971	16.5	7.2	8.2	36.4
Spanish*	1966	6.6	2.5	2.0	12.2
	1971	4.9	1.9	1.7	9.7
Negro	1966	14.6	5.4	4.0	26.2
	1971	17.4	6.7	5.8	34.2
Oriental	1966	8.1	3.6	4.4	17.6
	1971	8.7	3.6	4.9	19.7
Total	1966	50.2	20.9	20.3	100.0
	1971	47.5	19.4	20.6	100.0

* Spanish surname. These and other categories conform with the racial census of SFUSD.

The 1971 estimates are made on the basis of the continuation of current trends and the assumption that no major changes will occur in public policy that would affect residential patterns. In summary, the projected enrollments show: (1) a significant shift in the ethnic composition of the population, (2) a relative stability in the total school-age population, and (3) the increasingly greater concentration of the nonwhite population in areas that were predominantly nonwhite in 1965 and the continuing growth of the nonwhite population in areas that were showing signs of change between 1960 and 1965.

Even in the short term (the four years to 1971), there are significant uncertainties in the projections. These uncertainties relate to the following projections:

1. The large decrease in the white students resulting from decrease in birthrate, the movement of families from the city to the suburbs, and the large white enrollment in the parochial schools.

2. The possible acceleration of Chinese immigrants into a few neighborhoods.

3. The local population shifts (or persistences) resulting from redevelopment and stabilization projects.

The alternative attendance patterns, as well as the estimates of increased racial balance and the transportation and facility costs, were based on these enrollment estimates.

ATTENDANCE PATTERNS

Educational Organization (See Research Memorandum No. 4)

Five alternative pupil assignment patterns were designed and evaluated. They were then assessed for feasibility, educational implications, effect on racial balance, and cost. It was assumed that any pupil assignment plan would be accompanied by education programs that would make it effective and that compensatory education programs would be continued and strengthened. It was also assumed that specialized high schools--such as Lowell, Gompers, and O'Connell--would draw enrollment by admissions criteria appropriate to each and in a manner to ensure racial balance.

In most of the alternative pupil assignment proposals, upper grade schools are fed by specified schools serving lower grades. The exception to feeder attendance would be students qualified for admission to specialized senior high schools, like the academic school (Lowell) or the vocational schools. Feeder attendance patterns offer potential for (1) improving educational continuity, (2) improving racial balance at upper grades, (3) stabilizing interstudent relationships, and (4) decentralizing administration.

Several of the alternative attendance patterns call for a modification in grade level organization. One set of patterns would divide present elementary schools into two types: those serving kindergarten (K) and 1-3 and those serving K and 4-6. (Kindergartens were assumed to be available in every elementary school to minimize transportation of 5-year olds.) Another plan calls for reorganization into three types of schools, those serving K-4, 5-8, and 9-12, respectively.

Reorganization into schools that concentrate on a fewer number of grades can provide educational advantages in (1) deploying teachers in their fields of strength, (2) flexible grouping to individualize the challenge for each student, (3) providing specialized facilities, and (4) improving educational supervision.

Alternative Attendance Patterns (See Research Memorandum No. 7)

In the alternative A pattern, school attendance boundaries are adjusted. In the alternative B and C patterns, attendance boundaries are

adjusted and a feeder system for upper grade levels is employed. Alternative C also uses a 3-3-3-3 grade structure. In alternative D, the extremes of racial imbalance are corrected by school pairing with two-way busing (Princeton Plan). In alternative E the grade structure is reorganized into a 4-4-4 system, with feeder concepts.

Ten variations of the basic five alternative patterns were developed and evaluated. Several preliminary presentations were made to the Ad Hoc Committee and to community groups. Alternatives C and E--entailing the greatest impact on school operations--were selected for review and comment by district personnel. Then the ten patterns were revised, and two patterns were added. The 12 resulting patterns are defined in Table 17 at the end of this report. It is designed to be folded out for easy reference while the report is being read. Another way to differentiate the 12 alternatives is to describe changes from one to the next:

A-1 Adjust elementary boundaries only.

B-1 Adjust elementary boundaries and apply feeder attendance rules for junior and senior high schools. Bus certain junior and senior high school students.

B-2 Like B-1, but bus elementary students out of certain disadvantaged areas and assume that the academic senior high school becomes another comprehensive senior high school.

B-3 Like B-2, but assume Lowell remains the academic senior high school.

C-1 Like B-1, but reorganize elementary schools into two types: K, 1-3 and K, 4-6.

C-2 Like C-1, but bus elementary students out of certain disadvantaged areas as in B-2. Assume that the academic senior high school becomes another comprehensive senior high school.

C-3 Like C-2, but Lowell remains the academic senior high school.

C-4 Like C-2, but the academic senior high school is relocated at the Benjamin Franklin school site.

C-5 Like C-4, but Polytechnic Senior High School is assumed to be closed.

D-1 Pair (Princeton Plan) elementary schools that have extremes of racial imbalance.

D-2 Like C-5, but pair elementary schools that have extremes of racial imbalance.

E-4 Reorganize grade structure to a 4-4-4 system. Apply feeder attendance rules. The academic senior high school is relocated at Benjamin Franklin site.

Discussions of these patterns, summary sheets highlighting their major features, and maps showing assignment area boundaries are given in Research Memorandum No. 7.

Example of Alternative Pattern

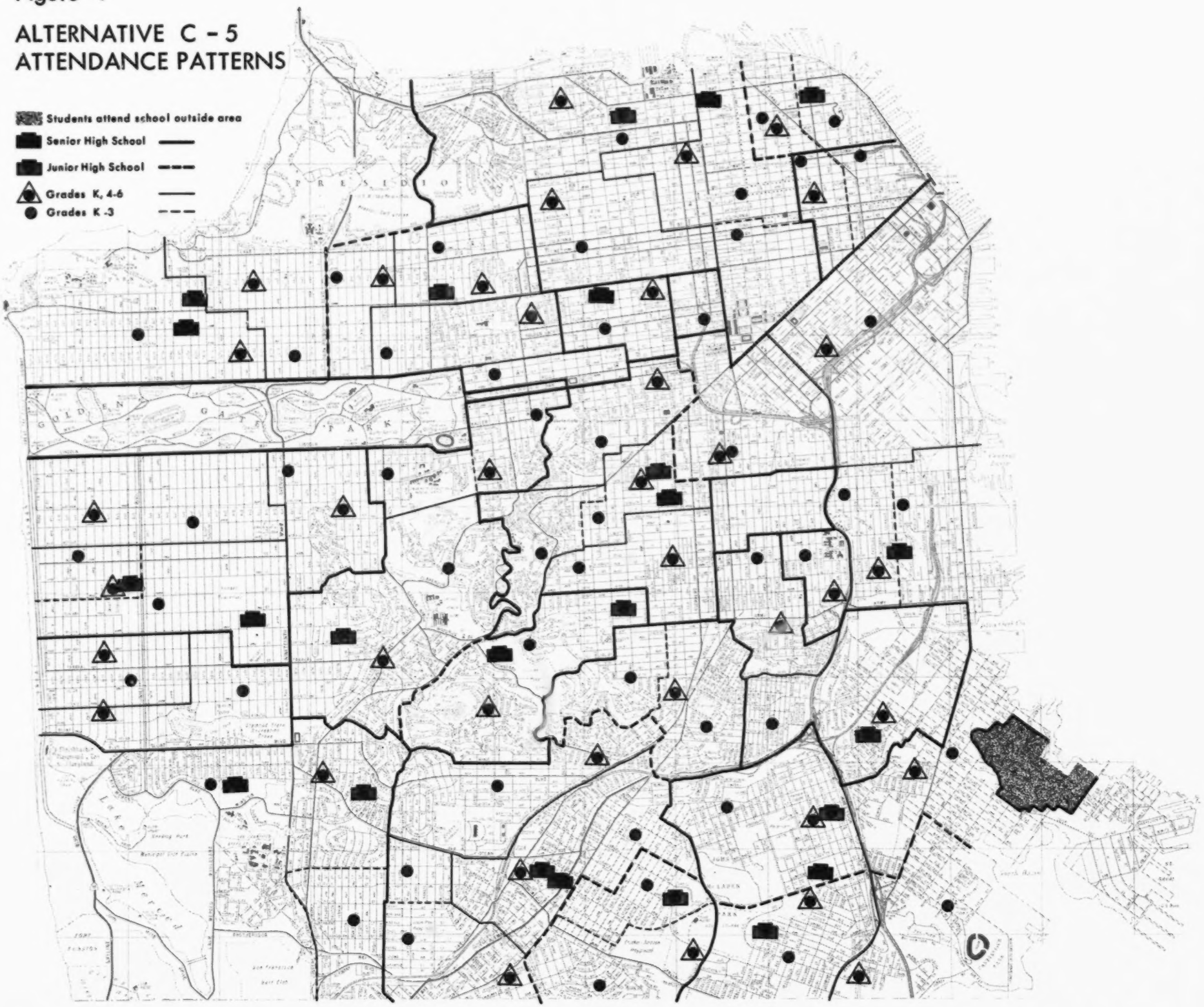
Alternative C-5 is used as a base case to illustrate the alternative patterns. This alternative uses the 3-3-3-3 school organization and employs feeder patterns. It was developed after preliminary review of the earlier alternatives by the district and community. The two most important differences between C-5 and the other alternative patterns are the phasing out of Polytechnic Senior High School and the use of the Benjamin Franklin site as the academic senior high school. The administrations of Horace Mann Junior High School and John O'Connell Trade and Industrial School are combined for the C-5 pattern. The summary data for the C-5 pattern follow in Table 2 and Figure 1.

The C-5 plan requires expansion of the Mark Twain Elementary and A. P. Giannini Junior High School facilities in the Sunset District. This alternative also contemplates a new small elementary school (ten classrooms) at the 38th Avenue and Ulloa Street site, now owned by the district. There is significant excess capacity in all school levels in the Chinatown area to allow for the possible underestimate of immigrant population from Hong Kong.

The C-5 plan requires more extensive busing than any other plan with one-way busing only (from lower to higher socioeconomic areas). It achieves a relatively high level of racial balance and phases out the most inadequate senior high school facility and site.

Figure 1

ALTERNATIVE C - 5
ATTENDANCE PATTERNS



TIME-PHASED IMPLEMENTATION
(See Research Memorandum No. 7)

The attendance pattern C-5 (3-3-3-3, with Benjamin Franklin as the academic senior high school and Polytechnic Senior High School phased out) is used as the example for a time-phased implementation plan. The proposed transition for the entire city would require four years to make. It would start in the part of San Francisco where the changes are largely self-contained; i.e., where interneighborhood transportation of students is minimal. Because reorganization of grade levels and other changes would require many adjustments new to the SFUSD, the changes proposed during the first two years of the transition are modest. The major shifts are initiated in the third year. Also, the beginning phase would be in an area relatively unaffected by construction of the new schools authorized by the 1964 bond issue. This gradual transition allows experimentation with and validation of the study assumptions relating to population shifts, racial balance achieved, and educational impacts.

The Balboa High School area in the southcentral part of San Francisco best meets the foregoing criteria. For this area, it is proposed that in Year 1 the first two grades in a school adopt the proposed new attendance policies. In the first year, graduating grades in each cycle would adhere to the old, or existing, attendance policies. This status would allow the new patterns of grade level organization and attendance to start on a modest basis so that experience could be gained in making a smooth transition.

The implementation proceeds from the southcentral part of the city more or less in a clockwise movement on around to other areas of the city. One reason parts of southeast San Francisco are left to the last is to allow time to complete Visitacion Valley Junior High School and Potrero Junior High School.

Figure 2 shows 18 zones in San Francisco, for each of which a slightly different set of attendance rules would apply during the four-year transition period. The attendance rule for each grade in each year for the 18 zones is shown in Table 3.

Years 1 through 4 can be converted to actual years. The earliest that Year 1 could be is the school year 1968-9, on the assumption that the new attendance policy is adopted during the school year 1967-8. Funds for capital costs would also have to be available in Year 1.

Figure 2

TIME PHASED ZONES

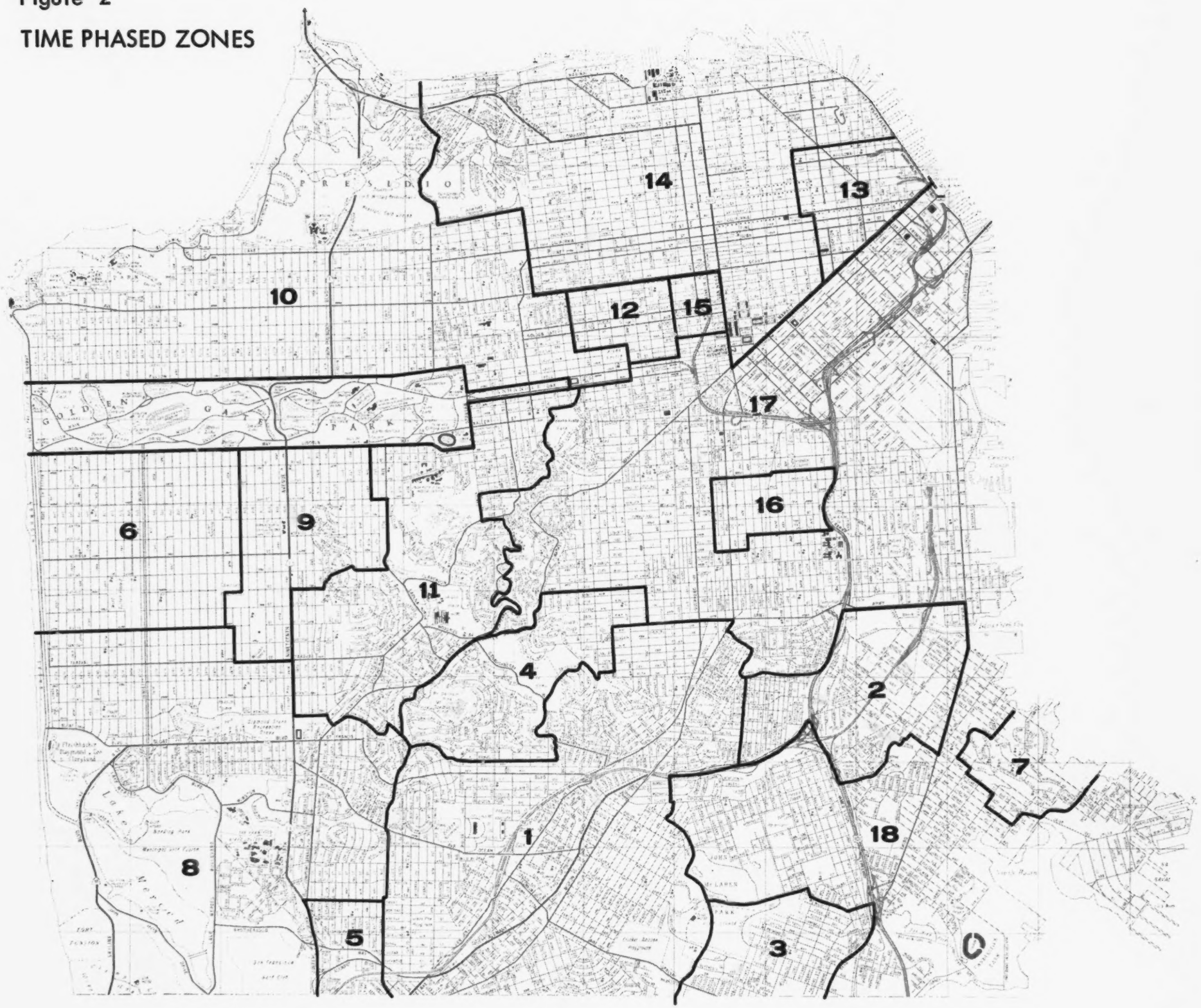


Table 3

TIME PHASING FOR ALTERNATIVE C-5

	Zone	Grades 1,2	4,5	7,8	10,11	3	6	9	12
Year 1 (1968)	1	C-5	C-5	C-5	C-5	Old†	Old	Old	Old
	2	C-5	C-5	C-5	Old	Old	Old	Old	Old
	3	Old	Old	Portola	C-5	Old	Old	Old	C-5
	4	C-5	C-5	C-5	Mission	Old	Old	Old	Old
	5	Old	Old	C-5	Old	Old	Old	Old	Old
	6	C-5	C-5	Old	Old	Old	Old	Old	Old
	7	C-5*	Old	Old	Old	Old	Old	Old	Old
Year 2 (1969)	1	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5
	2	C-5	C-5	C-5	Mission	C-5	C-5	C-5	Old
	3	C-5	C-5	Portola	C-5	Old	Old	Portola	C-5
	4	C-5	C-5	C-5	Mission	C-5	C-5	C-5	Mission
	5	Old	Old	C-5	Old	Old	Old	C-5	Old
	6	C-5	C-5	Old	Old	C-5	C-5	Old	Old
	7	C-5 all	Old	Old	Old	C-5	Old	Old	Old
	10	C-5	C-5	C-5	C-5	Old	Old	Old	Old
Year 3 (1970)	1	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5
	2	C-5	C-5	C-5	Mission	C-5	C-5	C-5	Old
	3	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5
	4	C-5	C-5	C-5	C-5 to Poly	C-5	C-5	C-5	Mission
	5	C-5	Old	C-5	Old	Old	Old	C-5	Old
	6	C-5	C-5	Old	Old	C-5	C-5	Old	Old
	7	C-5	C-5	C-5	Old	C-5	Old	Old	Old
	8	C-5	C-5	C-5	Old	Old	Old	Old	Old
	9	C-5	C-5	Old	Old	Old	Old	Old	Old
	10	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5
	11	C-5	C-5	C-5	C-5 to Poly	C-5	C-5	Old	Old
	12	C-5	C-5	C-5	Old	Old	Old	C-5	Old
	13	C-5	C-5	C-5	C-5 to Poly	Old	Old	Old	Old
	14	C-5	C-5	C-5	Old	Old	Old	C-5	Old
	15	C-5	C-5	C-5	C-5	Old	Old	Old	Old
	16	Old	Old	C-5	Old	Old	Old	C-5	Old
	17	C-5	C-5	C-5	C-5	Old	Old	Old	Old
	18	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5

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* 2/3 of 500 students, Hunters Point I and II and Annex.
† Old = 1966 attendance rules.

Diamond Heights Senior High School will not be available until 1971. One year is gained in implementing the C-5 attendance plan by substituting Polytechnic Senior High School for Diamond Heights Senior High School in Year 3. Then, when Diamond Heights Senior High School becomes available, the students can substitute Diamond Heights for Polytechnic, since Polytechnic is planned for eventual phase-out under the alternative.

EFFECTIVENESS OF ALTERNATIVES
(See Research Memorandums Nos. 1 and 7)

Definition

A racial balance measure was created to measure the degree of integration in the San Francisco school system. The index is so constructed that if every school had exactly the districtwide racial composition a value of 100 would result. If every school housed only one race (total segregation) a value of zero would result. Intermediate values would reflect the degree to which the racial composition of each school varied from the districtwide average composition.

The index measures not only a composite figure for all four races but also the degree of integration achieved for an individual race; e.g., it expresses the degree to which Oriental students attend school with non-Oriental students.

The racial balance index provides a way to quantify the effectiveness of each attendance pattern and to compare the effectiveness of each with the 1966 racial composition. (See Research Memorandum No. 1.)

Racial Balance in San Francisco's Public Schools

Racial balance was measured for each of the 12 alternative attendance patterns devised, as well as for the actual 1966 attendance. The indexes were computed for each of the four races and for the quadriracial distributions at elementary, junior high, and senior high school levels.

The racial balance measure for the actual 1966 attendance was set as the base value (100), and values for alternatives were determined by computing the improvement over 1966. Table 4 shows the measures for all attendance patterns at each school level. The improvement in racial balance for Negro-non-Negro is higher than it is for quadriracial balance in almost all alternatives. In planning pupil assignments the research team emphasized white-nonwhite and Negro-non-Negro racial balance. Secondary emphasis was given to the Spanish and Oriental groups.

Table 4

RACIAL BALANCE MEASURES (BASE 100)
ALTERNATIVE ATTENDANCE PATTERNS

Attendance Pattern	Elementary		Junior High		Senior High	
	Quadri-racial	Negro-Non-Negro	Quadri-racial	Negro-Non-Negro	Quadri-racial	Negro-Non-Negro
1966	100.0	100.0	100.0	100.0	100.0	100.0
A-1	105.9*	--	--	--	--	--
B-1	93.3	85.6	111.1	118.0	110.0	106.0
B-2	113.7	129.9	119.9	142.3	114.2	118.6
B-3	113.7	129.9	122.5	146.9	113.0	114.3
C-1	103.5	102.9	111.1	118.0	110.0	106.0
C-2	124.7	149.1	119.9	142.3	114.2	118.6
C-3	124.7	149.1	122.5	146.9	113.0	114.3
C-4	124.7	149.1	128.4	152.9	114.0	114.5
C-5	116.0	131.4	133.6	150.2	116.8	117.0
D-1	160.2*	--	--	--	--	--
D-2	145.1	189.8	147.7	171.0	130.5	131.0
E-4	105.2	112.6	114.9	128.1	114.8	117.4

* White-nonwhite only.

The effects of the emphasis are clearly revealed by comparing the 1966 and C-5 measures for all races. Table 5 shows the racial balance measures by race for the actual 1966 attendance and for patterns C-5 and D-2. Relatively great improvement for the white and Negro races is shown at all school levels, particularly at the secondary school level.

The relatively low racial balance scores achieved for the elementary school integration for the 1966 and the C-5 patterns mirror the residential segregation in San Francisco and the neighborhood character of most of these schools. Further, the index is so constructed that a few extremely imbalanced schools degrade the score. No means other than Princeton Plan pairing with its accompanying two-way busing was found to correct such cases of remaining imbalance.

Table 5

RACIAL BALANCE MEASURES (BASE 100)
ALTERNATIVES C-5 AND D-2

	White	Spanish	Negro	Oriental	Total
Elementary					
1966	100.0	100.0	100.0	100.0	100.0
C-5	127.9	104.1	131.4	101.5	116.0
D-2	136.0	104.1	189.8	151.4	145.1
Junior High					
1966	100.0	100.0	100.0	100.0	100.0
C-5	144.5	114.8	150.2	121.3	133.6
D-2	143.9	114.7	171.0	154.5	147.7
Senior High					
1966	100.0	100.0	100.0	100.0	100.0
C-5	127.6	114.3	117.0	109.6	116.8
D-2	129.1	116.6	131.0	141.8	130.5

The C-5 attendance pattern achieves a relatively high degree of racial balance for the white and Negro students at all levels and for all races except for the Oriental at secondary level. Little change is proposed for Spanish student attendance.

In the C-5 and D-2 patterns, only Lakeshore School has over 80 percent white enrollment. The low degree of racial balance achieved for Negro and Oriental students is influenced by the increasing concentration of these races in local neighborhoods. Four schools become over 80 percent Negro and four schools become Oriental between 1966 and 1971, despite the attempts under the C-5 pattern to improve racial balance. Table 6 shows the number of schools with over 80 percent attendance of one race, by alternative pattern and by race.

The D-2 pattern has major impact on the racial balance of the predominantly Negro and Oriental schools. This plan employs cross-busing of Negro and Oriental students--particularly between the southeast section of the city and Chinatown. It eliminates the heavy concentrations of Oriental students and reduces to six the schools with heavy concentrations of Negro students.

Table 6

SCHOOLS HAVING OVER 80 PERCENT OF ONE RACE
1966, ALTERNATIVES C-5 AND D-2

Race	Number of Schools		
	1966	C-5*	D-2
White	9	1	1
Spanish	0	0	0
Negro	17	14	6
Oriental	4	8	0
Total	30	23	7

* Four Negro and four Oriental schools became over 80 percent single race between 1966 and 1971.

While the D-2 cross-busing significantly improves the racial balance index for the Negro and Oriental total measures, it has little effect on Negro-white integration. Therefore, unless the SFUSD decides to cross-bus nonwhite racial groups, cross-bus white students into lower socioeconomic neighborhoods, and radically modify school facilities, it appears that the level of racial balance achievable in the C-2, C-3, C-4, and C-5 patterns is about as much as can be realized.

TRANSPORTATION REQUIREMENTS
(See Research Memorandum No. 6)

Introduction

The transportation figures reported for the study reflect the numbers of students who would have to be moved among neighborhoods to achieve the designed attendance patterns. An exception to this general measure relates to the academic senior high school; in no case is transportation of students attending that school added to the transportation load calculated for busing. It is the current policy for the district not to bus high school students and only limited busing of junior high school students exists now. Secondary students are included in the transportation costs in this study, however, because of the significantly increased distances and numbers of students involved in interneighborhood movements.

Bus Requirements and Costs

The bus operations were established for the C-5 base case by analyzing the flow patterns that represent the required movements of children from school to school. When the C-5 alternative is fully implemented it calls for 9,230 children (about 10 percent of those enrolled) to be transported.

The size of the bus fleet required was determined by assigning buses to the flow patterns. Constraints of school hours and bus sizes were observed, as were transit times and distances. Table 7 shows the number of buses and daily route miles for three bus sizes. The analysis included requirements for spare buses and the deadhead distances between schools and to and from terminals.

Table 7

BUSES AND ROUTE MILES

Seats/Bus	Total Buses	Daily Route Miles
67	87	3,460
79	68	2,757
91	62	1,579

Two basic costs are involved in district-owned school bus systems: capital costs and operating costs. Capital costs include buses, parking areas, and administrative and maintenance facilities. Operating costs include administrative staff salaries, wages for maintenance and operating crews, insurance, fuel, and parts, oil, and grease for the buses.

System descriptions (including required facilities, personnel, and equipment) were developed for the base case for the several bus sizes. In the system description, cost schedules were developed to show capital and operating costs. Ratios were then developed to show the projected cost per student transported by a hypothetical district-owned bus system.

An independent estimate was made by the San Francisco Muncipal Railway (Muni). This estimate resulted in costs similar to those derived for the district-owned system. Along with the decision as to which alternative attendance pattern to implement, the district administration must determine whether to inaugurate a district-owned bus system, to contract with Muni, or to contract with an independent contractor.

Total transportation costs for the alternative attendance patterns are presented in Table 8. The table shows the total number of students to be moved, the capital costs for the district-owned system, and the annual operating costs.

Table 8

ESTIMATED TRANSPORTATION COSTS
ALTERNATIVE ATTENDANCE PATTERNS

	B-1	B-3	C-3	C-5	D-2	E-4
Students transported	2,840	6,100	6,410	9,230‡	15,365	6,490
Capital costs* ($000)	$765	$1,493	$1,563	$2,194	$3,566	$1,581
Annual operating costs† ($000)	111	215	225	315	512	228

* Capital costs ($000) = 130 + 0.2236 (number of students).

† Annual operating costs ($000) = 20 + 0.032 (number of students).

‡ Research Memorandum No. 6 calculated busing costs on the basis of 9,620 students. Later refinement of the C-5 alternative pattern reduced the number to 9,230.

Intraneighborhood Transportation

In addition to the reported busing requirement, there is a considerable increase in the intraneighborhood distances. This increase is particularly true for the C and D patterns, which pair elementary schools at 1-3 and 4-6 school levels, normally doubling the attendance area for each school. It was assumed the district will provide transportation for students living beyond one mile for elementary and beyond 1-1/2 miles for junior and senior high school students.

To estimate the magnitude of increased intraneighborhood transportation requirements, a map analysis was conducted on the basis of 1965 attendance areas and school populations compared with the 1971 projected school attendance areas of the C-5 pattern. Table 9 presents the estimated number of students transported for 1965 and for the 1971 C-5 pattern.

Table 9

ESTIMATED INTRANEIGHBORHOOD STUDENTS TRANSPORTED
1965 AND ALTERNATIVE C-5

School	1965	C-5
Elementary	0	1,740
Junior High	2,100	1,860
Senior High	4,520	2,250

Several factors should be considered when interpreting the intraneighborhood data. First, the students bused to other neighborhoods are excluded from the data for both 1965 and 1971. This reduction in the students available affects the C-5 pattern more severely for intraneighborhood movements and at least partially explains the decrease in junior high and senior high school movements. Second, school facilities in 1971 are slightly more numerous and more evenly distributed geographically--Diamond Heights and the Benjamin Franklin academic senior high schools are added; Polytechnic is phased out; Potrero and Visitacion Valley Junior High Schools are added; Horace Mann and Benjamin Franklin Junior High Schools are converted for other uses. While these cases are few, they do affect the marginal distances concerned. This effect is particularly true with Everett Junior High School, which had almost one-third of the total junior high school intraneighborhood movement in 1965. Third, the busing

moved children from some areas that were remote from their neighborhood junior and senior high schools into schools outside the neighborhoods.

The 1,740 elementary school children of C-5 are additive movements over the 1965 pattern, where no children were more than one mile from their neighborhood elementary schools. Further, it should be recognized (as district administrative personnel pointed out) that on implementation of a plan such as C-5, other students would be subject to difficult intra-neighborhood movements because of the local terrain. The paired Miraloma and Diamond Heights Elementary Schools, which would require children to walk across the Glen Canyon Park Valley and O'Shaughnessy Boulevard, are an example. To the extent possible, such difficult movement was avoided in designing the attendance areas.

SCHOOL FACILITY MODIFICATIONS
(See Research Memorandum No. 7)

Background

A criterion imposed in devising the alternative attendance patterns was to adhere to the present and planned school capacities to the extent feasible. The estimated total number of students in 1971 is less than the gross capacity at all school levels, but there is little excess capacity at the high school level. If the capacity of any one school always matched the number of students assigned to it, there would be no problems of overcapacity. If the SFUSD wishes to increase racial balance by one-way busing out of impacted areas, however, an imbalance in capacity is immediately created at high school level. Senior high school additions are the major element of cost for all the alternatives.

Because of the imbalances in capacity in the various alternatives, each requires some additional space at existing schools. Several require major realignment of educational facilities. Table 10 shows the numbers of students and classrooms in schools that are more than 10 percent over capacity for the major alternatives. It also includes the number of classrooms required for new schools.

C-5 Attendance Pattern Facility Modifications

The C-5 alternative (phasing out Polytechnic Senior High School and modifying Benjamin Franklin to become the city's academic senior high school) is representative of the types of change in school facilities required to achieve a significant level of racial balance in the SFUSD. A maximum of 3,380 additional spaces is needed at all school levels, or 112 new classrooms.

The elementary school requirement is for 68 additional classrooms, or about 60 percent of the total space required. In all but three schools, it can be accommodated by the use of bungalows. A new facility is called for at the 38th and Ulloa Streets property already owned by the district. This facility would serve as a small (9 classrooms) 1-3 school to be paired with P. A. Hearst Elementary School. Two additional elementary schools will require major additions of capacity: Fremont (10 classrooms) and Mark Twain (14 classrooms).

Table 10

SCHOOLS TEN PERCENT OVER CAPACITY AND NEW SCHOOLS REQUIRED
(Number of Students and Number of Classrooms)*

	A-1	B-1	B-3	C-3	C-5	D-1	D-2	E-4
Elementary								
Students	350	110	210	1,480	2,040	340	1,720	0
Classrooms	11	4	7	49	68	11	57	0
Junior high								
Students	--	0	0	0	340	--	450	3,130
Classrooms	--	0	0	0	11	--	15	104
Senior high								
Students	--	830	790	790	1,000	--	1,000	1,700
Classrooms	--	28	26	26	33	--	33	57
Total, all levels								
Students	350	940	1,000	2,270	3,380	340	3,170	4,830
Classrooms	11	32	33	75	112	11	105	161

* Computed at 30 students per classroom at individual schools.

A significant portion of the excess capacity required at the elementary level results from the pairing of schools of unequal capacities. This imbalance could be partially compensated for by adopting a 1-4 and 5-6 grade level pattern for seven groups of schools. This pattern probably would not affect the educational advantages of the two level elementary school system nor the estimated increased racial balance. The net effect of the revised grade level arrangement would be to reduce the requirement for added elementary classrooms from 68 to 51.

The C-5 plan does not contemplate using the full capacity of the new construction programs at the Bret Harte and Burnett Elementary Schools. Some reallocation of unobligated funds from the 1964 bond issue may be appropriate for whichever alternative is adopted.

At secondary school level, 44 additional classrooms would be required. A. P. Giannini would have to be increased by 11 classrooms. It appears that there is sufficient space at the school site to accommodate these students, who could be housed either in bungalows along the south end of the property or in new school construction.

The conversion of the current Benjamin Franklin Junior High School to an academic senior high school would require a major construction program. Specific modifications were not considered for this study, and the rated capacity of Benjamin Franklin as a junior high school at 1,000 students was used as the basis for the estimate. It appears feasible to acquire land south of the current site for added construction. Also, the proximity to the new library across Geary Street and to the large Hamilton playground area are desirable supplements to the academic senior high school.

The plan further envisions converting the Horace Mann Junior High School to a senior high school. It could be administratively combined with the John O'Connell Trade and Industrial School and possibly with the Samuel Gompers school facility to form a major technical high school complex. Acquisition of the property adjacent to Horace Mann and Samuel Gompers in the two-block area between 22nd and 24th Streets would provide sufficient space for a desirable senior high school campus.

Polytechnic Senior High School could be phased out in 1971, according to this plan. Also, the capacity of the ten elementary schools and annexes would not be required. These schools could be used either for preschool and kindergarten purposes, or could be phased out.

Table 11 presents the summary C-5 facility modifications, assuming the revised attendance patterns and the changes in the new construction program could be effected.

Table 11

SUMMARY OF FACILITY MODIFICATIONS -- ALTERNATIVE C-5

School	Modification
Elementary	
New Ulloa	9-classroom school (1964 construction modification)
Cabrillo	Transfer in 2 bungalows over 1964 construction plan
Candlestick	Transfer in 3 bungalows
Cleveland	Transfer in 2 bungalows
Diamond Heights	Transfer in 2 bungalows
El Dorado	Transfer in 4 bungalows
Fremont	Transfer in 5 bungalows
LeConte	Transfer in 2 bungalows
Mark Twain	Add 14 classrooms (1964 construction modification)
Miraloma	Transfer in 4 bungalows
P. A. Hearst	Transfer in 2 bungalows
R. L. Stevenson	Transfer in 2 bungalows
Junior high	
Giannini	Add 11 classrooms (or bungalows)
Senior high	
Benjamin Franklin	Acquire land; construct 33 new classrooms

Comparison of Facility Modification Costs

Estimated costs for additional capacity were developed from material submitted by the district on the estimated costs of construction for the 1964 bond issue construction program. Costs per classroom were estimated at $50,000 for elementary schools and $80,000 for junior and senior high schools. The estimated cost to move and relocate a bungalow is $10,000. These figures were used to estimate the facility modification cost of the C-5 pattern. There would be additional land acquisition costs for adding to the Benjamin Franklin site and for converting the present facility to senior high school status. Similar expenditures would be required for the Horace Mann conversion--including land costs should the SFUSD decide to create a new senior high school campus. Modest land acquisition would probably be required to add rooms to the following elementary schools: Candlestick Cove, El Dorado, LeConte, Mark Twain,and Miraloma. Table 12 presents the breakdown of the estimated additional $4,150,000 for the

modified C-5 plan by year of implementation. Funding and partial construction payments would have to precede the implementation costs by appropriate lead times.

Table 12

ESTIMATED FACILITY MODIFICATION COSTS -- ALTERNATIVE C-5
(Thousands of Dollars)

Cost Element	Year of Implementation 1	2	3	4	Total
Move bungalows	$150	$ 60	$ 70	$ --	$ 280
Elementary construction	--	575*	575*	--	1,150*
Junior high construction	--	440	440	--	880
High school construction	--	--	1,320*	1,320*	2,640*
Gross total funds	$150	$1,075	$2,405*	$1,320*	$4,950*
1964 bond issue transfer	--	400	400	--	800
Net total funds	$150	$ 675	$2,005*	$1,320*	$4,150*

* Plus land acquisition costs.

To estimate the relative costs of the alternative plans, costs from the modified C-5 pattern were converted to estimated cost per additional student space required for the total plan. The costs per added classroom were then applied to the requirements for the other attendance alternatives. Table 13 presents these data. Land acquisition and internal school modification costs are not included.

The preliminary estimates of facility costs are considered sufficient to illuminate the relative costs of the alternatives presented and are sufficiently accurate to allow comparison among the various alternatives in the following cost-effectiveness section. These estimates are not sufficient for funding purposes and should be refined in detail when the SFUSD has selected an alternative for implementation.

Table 13

ESTIMATED FACILITY MODIFICATION COSTS--ALTERNATIVE ATTENDANCE PATTERNS

	B-1	B-3	C-3	C-5	D-2	E-4
Number of Modifications						
Elementary						
Bungalows	3	5	27	28	19	0
Classrooms	0	0	0	7	10	0
Secondary						
Classrooms	28	26	26	44	48	161
Costs (thousands of dollars)						
Elementary						
Bungalows	$ 30	$ 50	$ 270	$ 280	$ 190	$ 0
Classrooms	0	0	0	350	500	0
Secondary						
Classrooms	2,240	2,080	2,080	3,520	3,840	12,880
Total costs	$2,270	$2,130	$2,350	$4,150	$4,530	$12,880

COST-EFFECTIVENESS ANALYSIS
(See Research Memorandum No. 7)

Data comparing the costs of the various alternatives with the racial balance each achieves is presented in Research Memorandum No. 7.

Cost and Racial Balance Data

The cost data for transportation and added facilities for the alternative patterns are summarized in Table 14. Total capital costs range from a little over $3 million for the B-1 alternative (the present system with revised boundaries and busing at secondary level) to almost $15 million for the E-4 alternative (the 4-4-4 pattern with the Benjamin Franklin academic senior high school with one-way busing). Operating costs for the system are for transportation only, and range from $100,000 per year for the B-1 pattern to $500,000 for the D-2 pattern (3-3-3-3 attendance, cross-busing, and Benjamin Franklin as the academic senior high school).

Table 14

COST SUMMARY -- ALTERNATIVE PATTERNS
(Thousands of Dollars)

	B-1	B-3	C-3	C-5	D-2	E-4
Capital costs						
Busing	$ 765	$1,493	$1,563	$2,194	$3,566	$ 1,581
Facilities	2,270	2,130	2,350	4,150	4,530	12,880
Total	$3,035	$3,623	$3,913	$6,344	$8,096	$14,461
Operating costs						
Busing	$ 111	$ 215	$ 225	$ 315	$ 512	$ 228

The composite racial balance indexes--using 1966 as the base value 100--are presented in Table 15 for the quadriracial measure and for the white-nonwhite and Negro-non-Negro indexes. A concentration of values between 18 and 24 percent improvement is noted for the quadriracial index.

This range represents the maximum quadriracial index value, with the constraints of no major facility modifications and with no cross-busing. The exception to this range is the improvement of almost 45 percent achieved for the D-2 pattern, which involves the cross-busing of white, Negro, and Oriental students between pairs of 1-3 and 4-6 schools.

Table 15

COMPOSITE* RACIAL BALANCE INDEXES
ALTERNATIVE PATTERNS

	B-1	B-3	C-3	C-5	D-2	E-4
Quadriracial	105.3	118.2	122.7	123.1	143.8	120.5
Negro-non-Negro	107.1	136.2	143.8	139.1	169.0	141.5
White-nonwhite	125.7	133.8	137.8	144.9	148.7	142.2

* Composite of elementary, junior high, and senior high schools.

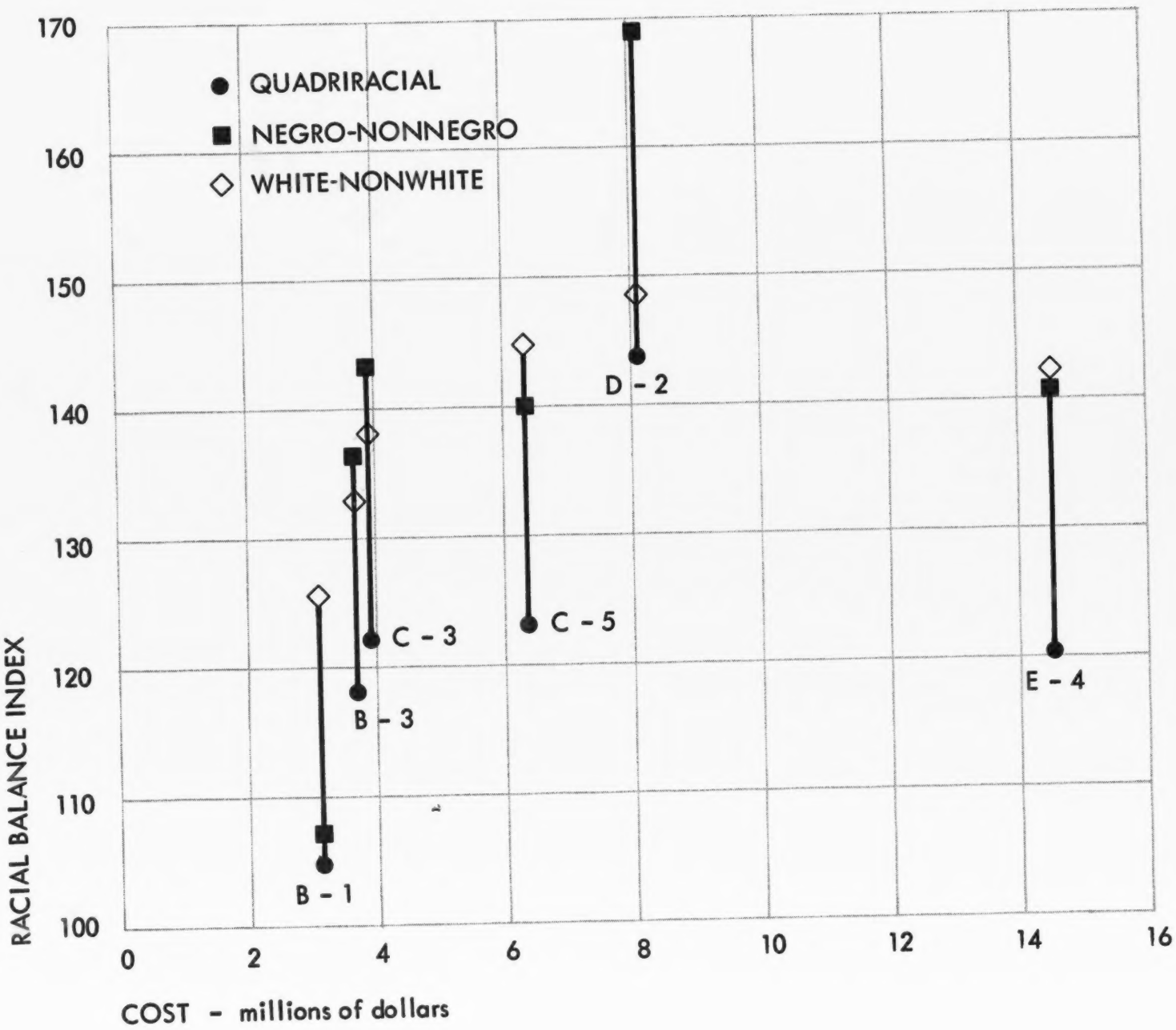
In the derivation of the alternative patterns, priority was given to the balance between Negro and white races. Table 15 shows that these values are consistently higher than the quadriracial index, explained by the dampening imposed by the relatively low degree of integration achieved for the Oriental and Spanish students. Exceptions to this generalization are the Negro measure for the B-1 pattern and the white measure for the D-2 pattern, which show relatively little improvement. The B-1 pattern requires less busing of Negro children at elementary level than was effected in 1966. The minor difference between the quadriracial and white values for the D-2 pattern results from the fact that the D-2 pattern is an extension of the C-5 pattern, which had already extensively distributed available white students.

Cost-Effectiveness Comparisons

The relationship of cost and effectiveness for the various patterns is shown in Figure 3 in terms of capital costs. This figure clearly shows the clustering of the quadriracial effectiveness index values between 115 and 120. Also indicated is a crude, but relatively constant, relationship between the increase in quadriracial balance and the increase in capital cost in the range studied: it appears that each increment of

Figure 3

CAPITAL COSTS
Cost-Effectiveness of Alternative Patterns

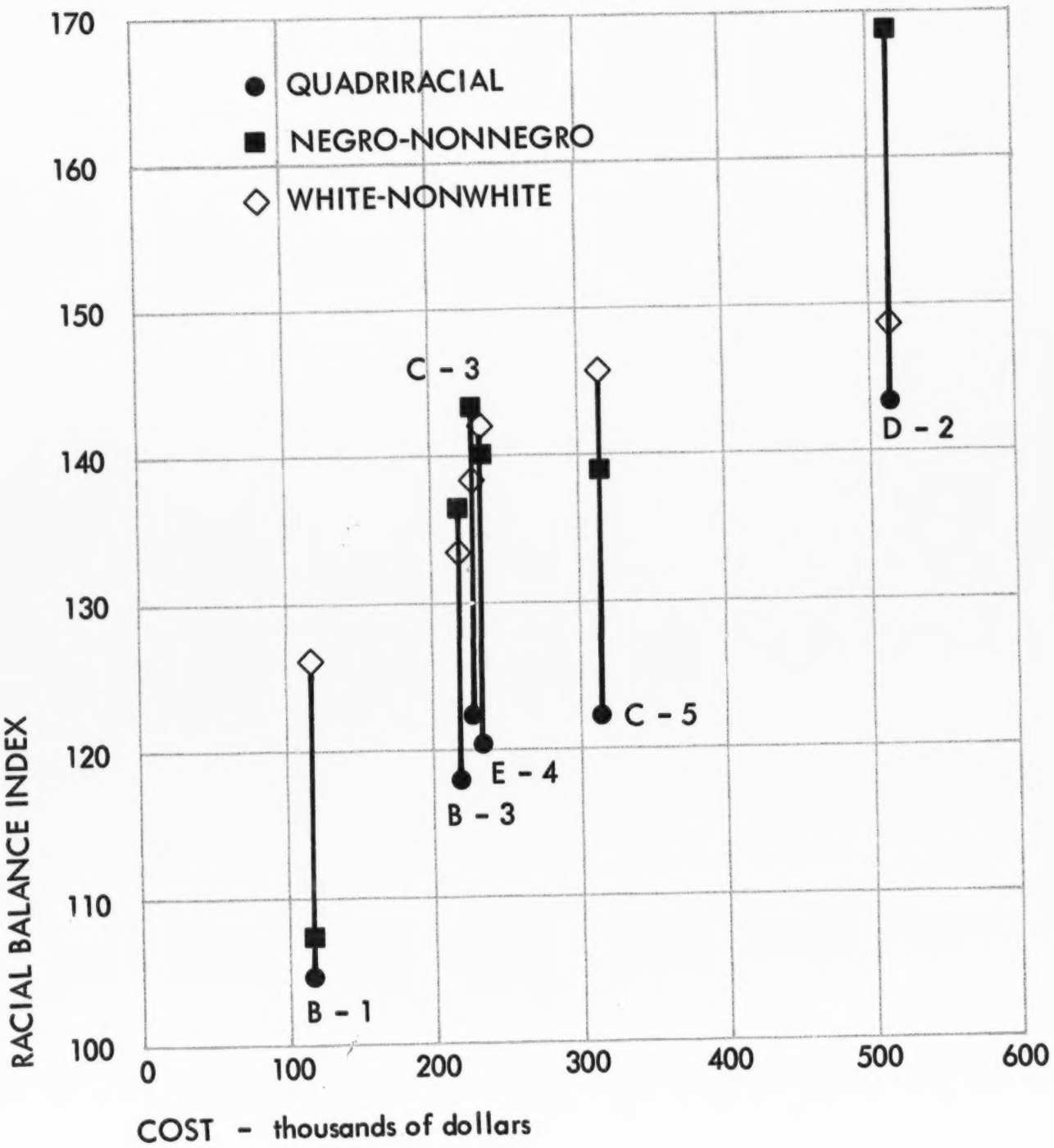


10 percent of racial balance improvement (by the index selected) adds approximately $1.3 million of capital costs. The E-4 pattern is an exception to this relationship, a deviation caused by the high cost of modifying the secondary school facilities to accommodate their increased enrollment from the added grade level at both junior and senior high school. Figure 4 presents similar data for the operating costs and racial balance measures for the selected alternatives.

Also indicated in the cost-effectiveness charts are the racial balance measures for the white-nonwhite and Negro-non-Negro indexes for the alternative patterns. In all cases, these values lie above the quadriracial index, indicating the greater degree of integration achievable for students of these races, as compared to the Spanish and Oriental students.

Figure 4

OPERATING COSTS
Cost-Effectiveness of Alternative Patterns



SURVEY OF DISTRICT STAFF
(See Research Memorandum No. 5)

A two-part survey of attitudes and characteristics of the staff of the SFUSD was conducted. The first part of the survey entailed a questionnaire based on the teacher questionnaire used by the U.S. Office of Education's survey Equality of Educational Opportunity. It was administered to all teachers who have been employed in the district five of the seven years from 1959 to 1966, or about 2,000 teachers. Questions ranged from demographic characteristics to race-related school issues.

The second part of the survey included a series of 18 group interviews with a sample of 178 teachers (who had also completed the questionnaire), a sample of principals, and a sample of compensatory and community teachers. The participants were asked to: (1) identify and evaluate steps the district should take to maintain and enhance the quality of educational offerings in racially balanced schools and (2) define the personal characteristics and professional qualifications desirable in teachers and administrators.

Survey Results

The survey of experienced teachers demonstrates statistically the relationship between the racial composition of schools and teacher preferences for the schools to which they are assigned. When teachers are grouped according to the racial composition of their schools, more elementary level teachers in white and Oriental schools prefer their assignments than do teachers in Negro schools. Similarly, in racially mixed schools and in schools that have changed from white to mixed or from mixed to minority over the last five years, fewer teachers prefer their assignments than do teachers in white and Oriental schools.

Teacher preferences are compared with other teacher characteristics such as age, sex, race, and salary level, resulting in a profile of experienced teachers in schools of various racial compositions. Teacher attitudes on policy questions are also discussed. Table 16 presents highlights. Note that only 17 percent of experienced San Francisco teachers favor busing to relieve racial imbalance. And 51 percent would keep neighborhood schools regardless of racial imbalance. These attitudes pose obstacles to be overcome within the staff if racial balance is to be

improved, since desegregation is attainable only through increased student transportation and some modification of neighborhood school practices.

Table 16

SURVEY OF EXPERIENCED TEACHERS, SFUSD
(Percentage Highlights)

		Type of School*					
	District Average	Oriental	White	White/ Mixed	Mixed	Mixed/ Minority	Negro
Preferring present assignment	63%	83%	67%	64%	57%	60%	40%
Receiving more than $10,000	72	73	72	58	51	61	63
Minority teachers	14	21	5	13	17	23	23
Favoring neighborhood school regardless of imbalance	51	66	55	51	47	43	32
Favoring busing to relieve imbalance	17	8	14	15	18	20	32

* Oriental - Schools with 66% or more Oriental students in both 1960 and 1966.
White - Schools with 66% or more white students in both 1960 and 1966.
White/mixed - 66% or more white in 1960 and 33-65% white in 1966.
Mixed - 33-65% white in both 1960 and 1966.
Mixed/minority - 33-65% white in 1960 and 66% or more minority in 1966.
Negro - Schools with 66% or more Negro students in both 1960 and 1966.

Interview Results

The second part of the study entailed a series of 18 group interviews with experienced teachers, compensatory teachers, and principals. Interviews were designed to outline for the Board of Education the views of the staff on educational measures that should accompany changes in racial and ethnic composition. These staff members contributed many constructive suggestions for improving the quality of educational offerings under conditions of changing racial composition. Specifically, they believe that compensatory education should be expanded and that specialized staff such as community teachers should be increased. They recommend revision of the curriculum to meet the needs of minority group children who have special problems, such as in developing language and reading skills, and that the guidance program be extended to meet the needs of all students, not just the college preparatory group. There were suggestions for school reorganization and some support for grade reorganization in a 3-3-3-3 or 4-4-4 arrangement.

Teachers and principals stress the great need for small class sizes and for flexible student-teacher ratios. In high ability classes, they say, it is easier to teach a larger number of students than it is in low or mixed ability classes.

In advising the Board on teacher and administrator recruitment and personnel policies, the district staff suggests that, since few colleges and universities prepare teachers for the reality of working in racially mixed schools, the school district itself develop stronger and more practical in-service training. It recommends that the district administration actively recruit teachers from colleges that do train teachers to work in integrated schools and that it seek unprejudiced and minority race teachers who want to teach integrated classes.

Overall, teachers and principals recommend that the district take leadership to improve racial balance by involving parents, school staff, and the community in all phases of preparation and implementation.

Table 17

ALTERNATIVE ATTENDANCE PATTERNS DEFINED

Alternative	Grade Organization	Academic Senior High School	Students Bused Interzone	
			Elementary	Secondary
A-1	6-3-3	Lowell	0	0
B-1	6-3-3	Lowell	0	2,840
B-2	6-3-3	None	2,270	3,390
B-3	6-3-3	Lowell	2,270	3,830
C-1	3-3-3-3	Lowell	620	2,840
C-2	3-3-3-3	None	2,570	3,390
C-3	3-3-3-3	Lowell	2,770	3,640
C-4	3-3-3-3	B. Franklin	2,570	4,470
C-5 close Polytechnic	3-3-3-3	B. Franklin	2,800	6,430
D-1 pairing	3-3-3-3	Lowell	8,750 (2-way)	--
D-2 pairing	3-3-3-3	B. Franklin	6,930 (2-way)	8,440
E-4	4-4-4	B. Franklin	1,020	5,470

ERRATA

Research Memorandum No. 8--Summary Report

IMPROVING RACIAL BALANCE IN THE SAN FRANCISCO PUBLIC SCHOOLS

Page 22, paragraph 3, sentence 2:

Delete: "This estimate resulted in costs similar to those derived for the district-owned system."

Substitute: "This estimate is presented in Research Memorandum No. 6."

Page 37, substitute following table:

Table 16

SURVEY OF EXPERIENCED TEACHERS, SFUSD
(Percentage Highlights)

	District Average	Type of School*					
		Oriental	White	White/ Mixed	Mixed	Mixed/ Minority	Negro
Preferring present assignment	63%	83%	67%	64%	57%	60%	40%
Receiving more than $10,000	72	74	80	70	63	61	63
Minority teachers	16	22	4	9	16	23	23
Favoring neighborhood school regardless of imbalance	51	66	55	51	47	43	32
Favoring busing to relieve imbalance	17	8	14	15	18	20	32

* Oriental - Schools with 66% or more Oriental students in both 1960 and 1966.
White - Schools with 66% or more white students in both 1960 and 1966.
White/mixed - 66% or more white in 1960 and 33-65% white in 1966.
Mixed - 33-65% white in both 1960 and 1966.
Mixed/minority - 33-65% white in 1960 and 66% or more minority in 1966.
Negro - Schools with 66% or more Negro students in both 1960 and 1966.

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